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Numerical Results of the Field Experiments 1970

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70/S/RN/1 Rotation I 1970

Rothamsted Research

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SAXMUNDHAM

ROTATION I 1970

(70/S/RN/1)

For history, treatments, rotations and results etc. see 'Details' 1967, 'Results' 68/A/9 and 69/S/RN/1. Grass and lucerne 1970.

Area of each new plot: 0.0236. Area harvested: Lucerne: 0.0034.

The rotation cropping is now discontinued and all blocks are sown to leys.

Treatments:

Plots with new treatments from 1966 (large plots):

Each main plot is split into two. Lucerne is grown on the northern half and grass on the southern. Manuring is unchanged except for FYM* and nitrogen. Lucerne does not receive nitrogen to any plots. Grass receives basal nitrogen at 0.8 cwt N for each cut as 'Nitro-Chalk'.

Plots continuing old treatments (small plots):

Each plot is sown to grass. Classical manuring is maintained except for FYM*.

* FYM was applied at 24 tons in autumn 1969. No further FYM will be applied before ploughing up grass and lucerne.

NOTE: Grass established poorly and all plots were re-sown in autumn without further cultivations. All small plots received basal nitrogen at 0.3 cwt N as 'Nitro-Chalk' to aid establishment. No cuts were taken from the grass plots.

Cultivations, etc.:-

FYM applied: (1) After beans and barley: 22 Sept, 1969. (2) After wheat: 6 Oct. (3) After sugar beet: 29 Oct. Ploughed: (1) 22 Sept. (2) 7 Oct. (3) 31 Oct.

Grass: Bonemeal applied: 25 Mar, 1970. P and K applied to large and small plots, test N applied to small plots: 5 May. Seed drilled at 30 lb and basal N applied to large plots: 6 May. Sprayed with 2,4-D ester at 21 oz a.e. in 20 gals: 26 Aug. Basal N applied to small plots, all grass redrilled into the partially established sward: 8 Sept. Varieties: Timothy (S.352) and Meadow Fescue (S.215) in equal proportions by weight. Lucerne: Bonemeal applied: 25 Mar, 1970. P and K applied: 5 May. Seed drilled at 50 lb: 6 May. Cut once: 26 Aug. Variety: Europe.

70/S/RII/1

SUMMARY OF RESULTS

LUCERNE. DRY MATTER: CWT

Treatment 1899-1965	Treatment from 1966	1st and only cut
D	DN1	25.3
B	B	10.7
N	N2P2	13.6
P	N1P1	10.6
K	N1P2K	10.3
-	N1P2	10.5
PK	N1P1K	13.7
NK	N2P2K	12.8
NP	N2P1	14.4
NPK	N2P1K	15.7
Mean		13.8

Mean D.M. %: 32.1